

CLAIMS

1. A method of producing a heating element that is comprised essentially of molybdenum silicide type and alloys of this basic material, c h a r a c t e r i s e d by producing a material that contains substantially  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  and  $\text{Al}_2\text{O}_3$  by mixing a molybdenum aluminium silicide  $\text{Mo}(\text{Si}_{1-y}\text{Al}_y)_2$  with  $\text{SiO}_2$ , wherein the  $\text{SiO}_2$  is at least 98% pure.
2. A method according to Claim 1, c h a r a c t e r i s e d in that the  $\text{SiO}_2$  is present in silicates, such as mullite and sillimanite, which do not effect the symmetry of the crystal lattice of molybdenum silicide.
3. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.4 - 0.6.
4. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.45 - 0.55.
5. A method according to Claim 1, 2, 3 or 4, c h a r a c t e r i s e d by substituting molybdenum partly with Re or W in the material  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ .
6. A electrical heating element that is comprised substantially of the molybdenum silicide type and alloys of this basic material, c h a r a c t e r i s e d in that said element is comprised chiefly of the materials  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  and  $\text{Al}_2\text{O}_3$ , wherein  $\text{SiO}_2$  having a purity of at least 98% is added during the production process.
7. A heating element according to Claim 5, c h a r a c t e r i s e d in that x lies in the range of 0.4 - 0.6.

8. A heating element according to Claim 7, c h a r a c -  
t e r i s e d in that  $x$  is caused to lie in the range of 0.45  
- 0.55.

9. A heating element according to Claim 5, 6, 7 or 8,  
c h a r a c t e r i s e d in that molybdenum in the material  
 $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  is replaced partially with Re or W.